

GGCACGAGTG TGCCTAACAG AGAAAGAGAG ACCGATAGCC TCCTCATTCA CTATGGCGAT 60
 CCGATCGCCA GCTTCGCTGC TGTATTATTGC GTTCTGATG CTTGCGCTCA CAGGAAGACT 120
 5 GCAGGCCGGG CGCAGCTCGT GCATTGGCGT CTTACTGGGA CAAAACACAG ACGAGGGAAG 180
 CTTAGCAGAT GCTTGTGCCA CAGGCAACTA CGAATACGTG AACATCGCCA CCCTTTTCAA 240
 10 GTTTGGCATG GGCCAAACTC CANAGATCAA CCTCGCCGGC CACTGTGACC CTCGGAACAA 300
 CGGCTGCGCG CGCTTAAGCA GAGAAATCCA GTCCTGCCAG GAGCGTGGAG TCACGGTGAT 360
 GCTCTCCATC GGAGGTGGCG GGTCTTATGG CCTGAGTTC ACCGAAGACG CCAAGGACGT 420
 15 GGCGTCATAC CTCTGGCACA GTTCTTGGG TGGTCTGCT GTCGCTACT CTCGACCCCT 480
 CGGGGATGCG GTTCTGGATG GCATANACTT CAACATCNCC GGAGGGAGCA CAGAACACTA 540
 TGATGAACTT GCCGCTTTCC TCAAGGGCTA CNACGAACAG GAAGCCGGAA CGAAAAAANT 600
 20 TTTACTTGAA TGCTGCTCCC NCANTGTCCT TTCCCGGATT ACTGGCTTGG CACCCACTCA 660
 NAAAAATCT CTTCNACTT CCNTGTGGGT TGCANTTCCT CCAANAACCC TTCCTTGCCN 720
 25 TTTCTCCCCA AAACCTATCC ATCTTGCAAT TCCTTTCACA AATTGGGTCN TNTCCNTCCC 780
 NGCCCCNAAA ACTTTTTCCC TNGGGCTCC 809

(2) INFORMATION FOR SEQ ID NO: 48:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 809 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: cDNA

(vii) IMMEDIATE SOURCE:
 (B) CLONE: U-D86

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

GGCACGAGCC ACAAGCTTGC CTTTGGTTGT GCCTAACAGA GAGAGAGAGA GAGACAGACC 60
 GATAGCCTCC TCATTTACTA TGGCGATCCG ATCGCCAGCT TCGCTGCTGT TATTTGCGTT 120
 50 TCTGATGCTT GCGCTCACAG GAAGACTGCA GGCCCGGCGC AACTCATGCA TTGGCGTCTA 180
 CTGGGGACAA AAGACAGACG AGGGAAGCTT AGCAGATGCT TGTGCCACAG GCAACTACGA 240
 55 ATACGTGAAC ATCGCCACCC TTTTCAAGTT TGGCATGGGC CAAACTCCAG AGATCAACCT 300
 CGCTAGCCAC TGTGACCCCTC AGAACAACGG CTGCGCGCGC TTAAGCAGCG AAATCCAGTC 360
 CTGCCAGGAG CGTGGAGTCA AGGTGATGCT CTCCATCGGA GGTGGCGGGT CTTATGGCCT 420
 60 GAGTTCCACC GAAGACGCCA AGGACGTGGC GTCATACCTC TGGCACAGTT TCTTGGGTGG 480
 TTCTGCTGCT CGTACTCTC GACCCCTCGG GGATGCGGTT CTGGATGGCA TAACTTCAA 540
 65 CATCNCCGGA GGGAGCACAG AACACTATGA TGAAGTGGC GCTTTCCTCA AGGGCTACAA 600
 CGANCAGGAA GCCGGAACGA AAAAAGTTCA CTTGAATGCT GCTCCCCANT GTCTTTCCCG 660
 GATTACTGGC TTGGCAACGC NCTCCAAAAC AAATCTCTTC CACTTCCTGT GGGTGCANTC 720
 70 CTCCACAAAC CTTCTGTCAT TCTCCCCAAA CCTATCAATC TTGCNAAATG CGTTCAACAA 780

TTNGGGTCTT TTCATCCCCG CCCAAAAC

809

(2) INFORMATION FOR SEQ ID NO: 49:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 785 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: cDNA

- (vii) IMMEDIATE SOURCE:
(B) CLONE: U-D90

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

GGCACGAGGA GAGACCGATA GCCTCCTCAT TCACTATGGC GATCCGATCG CCAGCTTCGC 60
TGCTGTATT TGCCTTCTG ATGCTTGCGC TCACAGGAAG ACTGCAGGCC GGGCGCAGCT 120
CGTGCAATTGG CGTCTACTGG GGACAAAACA CAGACGAGGG AAGCTTAGCA GATGCTTGTC 180
CCACAGGCAA CTACGAATAC GTGAACATCG CCACCCTTTT CAAGTTTGGC ATGGGCCAAA 240
CTCCAGAGAT CAACCTCGCC GGCCACTGTG ACCCTCGGAA CAACGGCTGC GCGCGCTTAA 300
GCAGAGAAAT CCAGTCTGTC CAGGAGCGTG GAGTCACGGT GATGCTCTCC ATCGGAGGTG 360
GCGGGTCTTA TGGCCTGAGT TCCACCGAAG ACGCCAAGGA CGTGGCGTCA TACCTCTGGC 420
ACAGTTTCTT GGGTGGTTCT GCTGCTCGCT ACTCTCGACC CCTCGGGGAT GCGGTTCTGG 480
ATGGCATANA CTTCAACATC GCCGGAGGGA GCACAGAACA CTATGATGAA CTTGCCGCTT 540
TCCTCAAGGC CTACAACGAG CAGGAAGCCG GAACGAAAAA AGTTTACTTG AATTGCTGCT 600
CCGCANTATC CTTTCNGAT TACTGGCTTG GCAACNCNCT CCAAAAAANA TCTCTTCCAC 660
TTCCTGTTGG GTGCAATTCT TCCAANAACC CNTTCNTGCC ATTTCTCCCC AAAACGCTTT 720
CCATCTTTGC AAATGCCTTT CAACAATTGG GGTCTTGTTT CNNCCCTGCC CCAAAAAC

TTCCT 785

(2) INFORMATION FOR SEQ ID NO: 50:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 813 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: cDNA

- (vii) IMMEDIATE SOURCE:
(B) CLONE: U-D93

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

GGCACGAGCG ATAGCCTCCT CATTCACTAT GGCGATCCGA TCGCCAACTT CGCTGCTGTT 60
ATTTGCGTTC CTGATGCTTG CGCTCACGGG AAGACTGCAG GCCCGGCCCA GCTCATGCAT 120

TGGCGTCTAC TGGGGACAAA ACACCGACGA GGAAGCTTA GCAGATGCTT GTGCCACAGG 180
CAACTACGAT TACGTGAACA TCGCCACCCT TTTCAAGTTT GGCATGGGCC AAATCCAGA 240
5 GATCAACCTC GCCGGCCACT GTGACCCTCG GAACAACGGC TGC GCGCGCT TGAGCAGCGA 300
AATCCAGTCC TGCCAGGAGC GTGGCGTCAA GGTGATGCTC TCCATCGGAG GTGGCGGGTC 360
10 TTATGGCCTG AGTTCACCG AAGACGCCAA GGAAGTAGC GTCATACCTC TGGCACAGTT 420
TCTTGGGTGG TTCTGCTGCT CGCTACTCGA GACCCCTCGG GGATGCGGAA CTGGATGGCA 480
TANACTTCAA CATCGCCGGA GGGAGAACAG AACACTATGA TGAATTGCC GCTTTCCTCA 540
15 AGGCCTACAA CGANCAGGAA GCCGGAACNA AAAAAGTTCA CTTGAATTGC TGCTCCGCAG 600
TGTCCTTTCC CGGATTACTG GCTTGGCAAC GCACTCAGAA CANATCTCTT CNACTTCCTG 660
TGGGTGCAAT TTCCTCCACA ANCCTCCNT GCCATTTCTC CCAAAAAGCT ATCNATCTTG 720
20 CAAATGCGTT CNACAATTGG GTCTTTTCCA NCCTGCNCAA AACTGTTCTT TGGGCTCCCC 780
CTGCCCCTGA AGGTGCNCCA ATTGGTGGCT NCT 813

(2) INFORMATION FOR SEQ ID NO: 51:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 819 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: cDNA

(vii) IMMEDIATE SOURCE:
(B) CLONE: U-D61

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

GGCACTCAGG AACTCCAACA TCCAAGTCTT GTTGATGTC CCCCATCCG ACGTGCAGTC 60
45 ACTGGCCTCC AATCTTCGG CCGCCGGCGA CTGGATCCG AGGAACGTC TCGCCTACTG 120
GCCCAGCGTC TCCTTTCGAT ACATAGCTGT CGGAAACGAG CTGATCCCCG GATCGGATCT 180
50 GGCGCAGTAC ATCCTCCCCG CCATGCGCAA CATCTACAAT GCTTTGTCCT CGGCTGGCCT 240
GCAAAACCAG ATCAAGGTCT CGACCGCGGT CGACACGGGC GTCCTCGGCA CGTCCTACCC 300
TCCCTCCGCC GGCCTTCTT CCTCCGCCG CCAGGCGTAC CTGAGCCCCA TCGTGCAGTT 360
55 CTTGGCGAGT AACGAGCGC CGCTCCTGGT CAATGTGTAC CCTTATTTTA GCTACACCGG 420
CAACCCGGGA CAGATCTCGC TGCCCTACGC CCTGTTACG GCCTCCGGCG TCGTCGTGCA 480
60 GGATGGGCGA TTCANCTATC AGAACCTGTT CGACGCCATC GTCGACGCGG TCTTCGCGGC 540
GCCTGAAAAA AATGGGAAGG GCGAACGTGG CCGTGGTGGT GTCCGAAAAA GGGTGGCCGT 600
CCGCGGGCGG AAGAACCNA AACNAACACC ANCAACNCCG CCGGAANTTT CAACCANAAC 660
65 TTGATCAGGC ATGTTNGGCG GAAGAACCC AAGGAAACC AGGGAAGGAA ATCAAGGCTT 720
CNTNTTCAA AANTTTCCAC CAAAACCNAA AAGGTGGANG GATCCAACAA AACTTTGGCC 780
TGTTTTATCC CAANNAACAN CCCNTCTTAC CNAATAACT 819

(2) INFORMATION FOR SEQ ID NO: 52: